FOURTH QUARTER 2021

NORTH AMERICA

QUARTERLY CONSTRUCTION COST REPORT

RLB Rider Levett Bucknall

ON THE COVER

KEAHUOLU COURTHOUSE

KAILUA-KONA, HAWAII

Built on a ten-acre parcel on Hawaii Island, the Keahuolu Courthouse is a modern facility for the Hawaii State Judiciary's civil, criminal and family court operations that provides the community with an efficient and equitable justice system. The 140,000 SF complex consolidates and replaces courthouse buildings that previously operated across three separate locations, and now offers a full-service facility where the public can take care of all court-related matters in a centralized and secure place.

With five courtrooms, a law library, self-help center, conference and training rooms, holding cells, detention areas, and dedicated space for witnesses, attorney interviews and grand jury convenings, the Keahuolu Courthouse is a first-in-class judiciary facility and civic landmark for Hawaii Island.

Rider Levett Bucknall served as a trusted advisor to the design team during the programming and design stages of the project, providing technical expertise and independent assessment of construction costs. Taking into consideration design intent for various end users, along with constraints for new development on a geographically complex site, the cost specialty team maintained alignment between the project vision and available funding.

With the unique capability to provide the owner, a State of Hawaii agency, a local team based on Hawaii Island, Rider Levett Bucknall was responsible for managing construction and ensuring that the judiciary facility was delivered to the highest quality. Ultimately, Rider Levett Bucknall's steadfast commitment and ability to build trusting relationships among stakeholders were key to successful delivery of a project that will serve the Hawaii Island community for generations.

NORTH AMERICA
AT A GLANCE

Anyone who has driven on a highway recently or experienced a major train or airplane delay knows that investment in America's infrastructure is long overdue. It's vital to bear in mind how failing infrastructure has compromised the country's competitiveness and economic growth, in the AEC industries as well as other businesses. Without world class, safe roads and bridges, climate-friendly transport, or state-of-the art broadband, businesses cannot flourish and people cannot work productively.

Signed by President Biden in early November 2021, the Bipartisan Infrastructure Law will make an historic amount of investment in critical infrastructure. The law focuses on modernizing key areas, including improving and rebuilding roads, bridges, public transit, rail, ports, and airports.

While this legislation is an important step in the right direction, there are other operational fronts that are posing problems for the construction industry and need to be addressed. One is the ongoing situation with the supply chain. Approximately 40% of the goods that enter the country on the West Coast come through two California ports: Los Angeles and Long Beach. To help relieve congestion at these points of entry, the administration brought together labor and management and encouraged them to increase operations from five days/40 hours a week to 24 hours a day, seven days a week by adding more work shifts at night and on the weekends.

Progress has also been made on alleviating the logistical logjams that have prevented efficient transportation of goods and materials from these ports to warehouses and manufacturers across the country.

Again, this is promising. But the AEC industries still face a couple issues that could dampen the situation. One is increasing construction costs. Over the last 12 months, (bid) construction costs have risen by 7.42%. These increases are reminiscent of the sort of cost increases that we saw in the period 2004 through 2007.

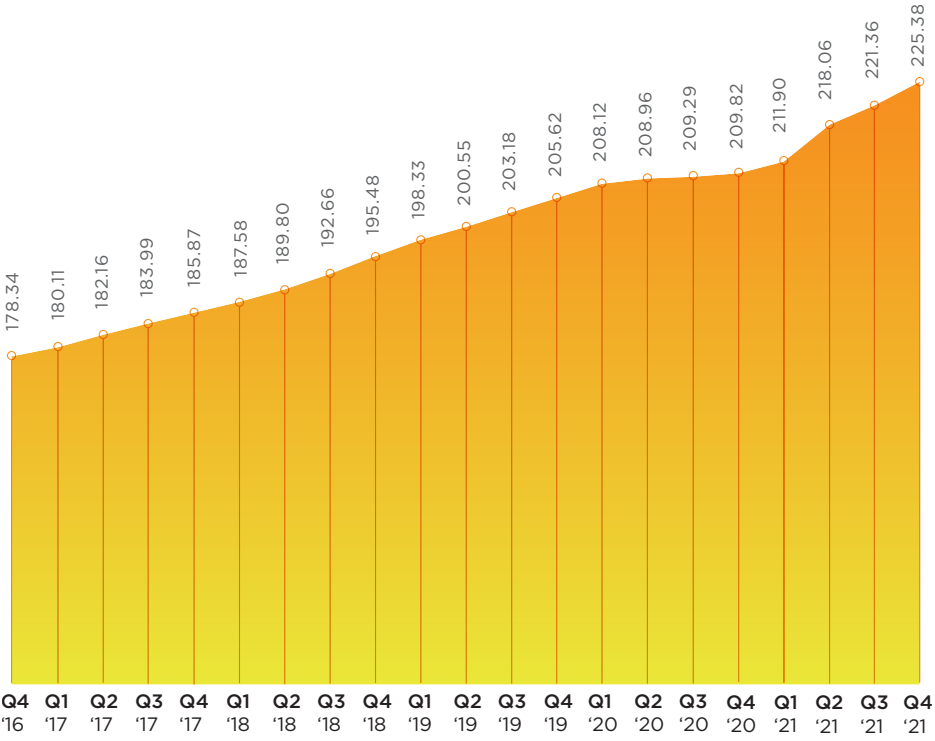
The other is the labor shortage that is affecting multiple key sectors. The American Trucking Association claims the industry is short 80,000 drivers. Officials from the Association of General Contractors (AGC) have said that while spending on many categories of public construction will increase as the cash from the Bipartisan Infrastructure bill begin to flow, skilled labor shortages were impacting construction schedules and budgets and prompting some owners to delay or cancel projects. The AGC has urged the Biden administration to invest more in career and technical education programs that serve as a pipeline into construction careers.

As we collectively navigate the next chapter in these volatile times, Rider Levett Bucknall continues to inspire confidence in our clients through deliberate advisory actions that are based on firm data and decades of experience.

Julian Anderson FRICS
President,
North America

UNITED STATES

NATIONAL CONSTRUCTION COST INDEX



Welcome to the fourth quarter 2021 issue of the Rider Levett Bucknall Quarterly Cost Report! This issue contains data current to mid-Q4 2021.

$1,598.0 Billion

According to the U.S. Department of Commerce, construction-put-in-place during October 2021 was estimated at a seasonally adjusted annual rate of $1,598.0 billion, which is

0.2% above

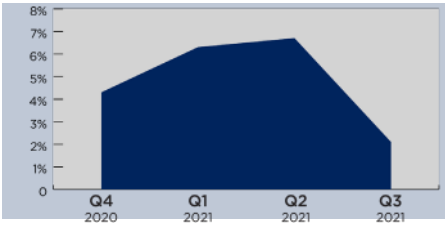
the revised September 2021 estimate of $1,594.8 billion, and

8.6% above

the October 2020 estimate of $1,471.17 billion.

The National Construction Cost Index shows the changing cost of construction between October 2016 and October 2021, relative to a base of 100 in April 2001. Index recalibrated as of April 2011.

KEY UNITED STATES STATISTICS

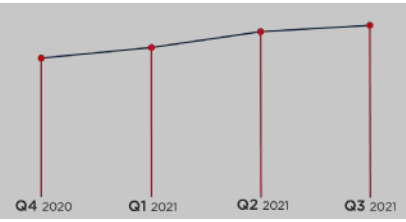


Gross Domestic Product* (GDP)

GDP returns to 2.1%, the same as its pre-pandemic level in Q4 2019.

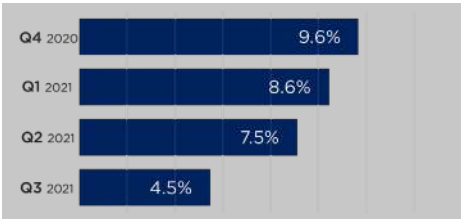
Consumer Price Index (CPI)

CPI is 274.3, a year-over-year increase of 5.38%; compared to the previous year-over-year increase of 1.36%.



Architectural Billings Index (ABI)

The ABI reports 56.6 during Q3, with architecture firms continuing to report strong business conditions.



Construction Unemployment

Construction unemployment continued a downward trend, returning to first pre-pandemic rate of 4.5%.

National Unemployment

Although still elevated, national unemployment continues a downward trend, reporting 5.1% during Q3.

GDP represented in percent change from the preceding quarter, seasonally adjusted at annual rates. CPI quarterly figures represent the monthly value at the end of the quarter. Inflation rates represent the total price of inflation from the previous quarter, based on the change in the Consumer Price Index. ABI is derived from a monthly American Institute of Architects survey of architectural firms of their work on the boards, reported at the end of the period. Construction Put-in-Place figures represent total value of construction dollars in billions spent at a seasonally adjusted annual rate taken at the end of each quarter. General Unemployment rates are based on the total population 16 years and older. Construction Unemployment rates represent only the percent of experienced private wage and salary workers in the construction industry 16 years and older. National unemployment rates are seasonally adjusted, reflecting the average of a three-month period.

* Adjustments made to GDP based on amended changes from the Bureau of Economic Analysis.

Sources: U.S. Bureau of Labor Statistics, Bureau of Economic Analysis, American Institute of Architects.

UNITED STATES

INDICATIVE CONSTRUCTION COSTS

	OFFICES				RETAIL SHOPPING				HOTELS				HOSPITAL	
	PRIME		SECONDARY		CENTER		STRIP		5 STAR		3 STAR		GENERAL	
LOCATION	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
USA														
Boston	350	550	225	325	200	300	150	240	400	580	275	390	425	675
Chicago	280	450	175	280	185	290	135	220	400	660	290	410	380	720
Denver	290	400	175	235	125	225	105	175	335	510	250	350	415	625
Honolulu	315	540	195	310	245	525	225	390	610	745	350	560	475	800
Las Vegas	200	350	135	190	120	480	105	190	310	580	185	315	400	475
Los Angeles	240	360	180	265	160	350	135	195	380	560	285	365	615	930
New York	360	830	210	520	310	620	330	650	445	670	330	445	560	840
Phoenix	220	350	140	195	175	295	95	170	350	550	185	275	425	600
Portland	230	315	210	310	210	315	185	260	340	440	260	365	465	620
San Francisco	400	655	310	500	310	510	235	400	500	750	380	600	540	875
Seattle	275	520	185	250	200	330	150	250	350	550	250	350	450	630
Washington	325	500	225	325	175	300	140	225	400	600	265	400	500	765
CANADA														
Calgary	245	370	205	250	200	280	125	170	270	420	195	225	605	835
Toronto	240	390	200	275	180	375	145	190	350	640	205	250	510	800

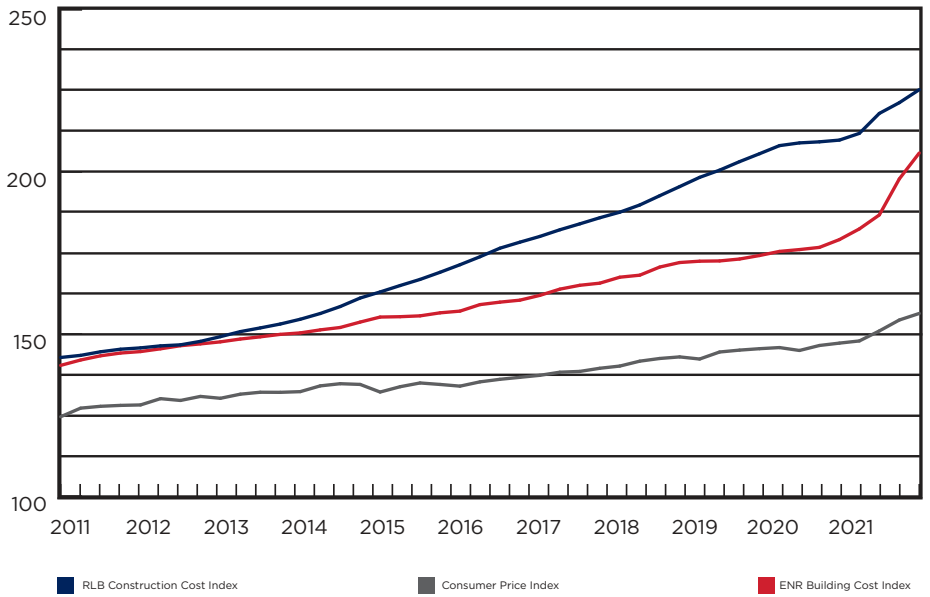
INFLATION INDEX COMPARISON

The chart on the following page demonstrates the relative differences in inflation between the cost of general goods and services (represented by the U.S. Bureau of Labor Statistics' Consumer Price Index), the cost of construction materials and labor (represented by Engineering News-Record's Building Cost Index) and the bid cost of construction (represented by Rider Levett Bucknall's National Construction Cost Index).

Each index is showing a significant increase in 2021 - especially in the second half of the calendar year - which depicts, at times, dramatic cost increases across the various inputs that influence construction costs. The Consumer Price Index (CPI) increase, in excess of 5% year-over-year, is the largest CPI increase since 1990. ENR's index shot-up almost 15% over the same period, while RLB's index increased almost 7.5%; its largest year-over-year increase since the start of the Global Financial Crisis in 2007.

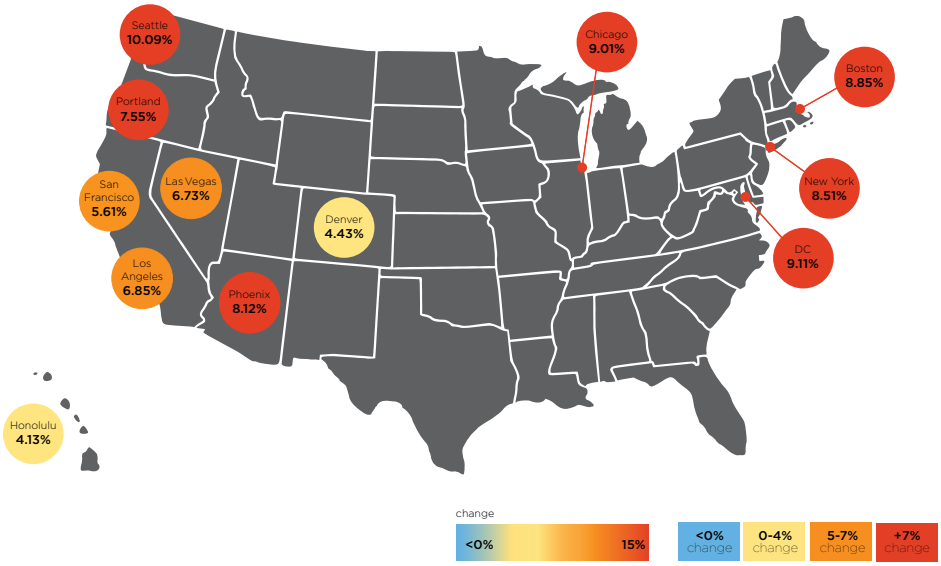
The data in the chart below represents estimates of current building costs in each respective market. Costs may vary as a consequence of factors such as site conditions, climatic conditions, standards of specification, market conditions, etc. Values of U.S. locations represent hard construction costs based on U.S. dollars per square foot of gross floor area, while values of Canadian locations represent hard construction costs based on Canadian dollars per square foot.

INDUSTRIAL		PARKING				RESIDENTIAL				EDUCATION					
WAREHOUSE		GROUND		BASEMENT		MULTI-FAMILY		SINGLE-FAMILY		ELEMENTARY		HIGH SCHOOL		UNIVERSITY	
LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
110	190	85	140	100	160	185	315	260	360	350	475	375	500	375	600
110	185	80	125	125	170	165	400	220	420	265	380	300	405	350	600
100	185	125	145	140	185	155	290	190	450	280	400	310	450	380	575
110	235	140	190	155	255	250	420	275	525	475	785	485	665	610	895
70	100	50	85	70	145	150	355	175	350	225	350	270	455	350	575
125	190	105	125	135	195	235	370	205	365	365	480	310	550	460	625
120	210	100	180	140	220	220	420	310	620	475	600	520	660	510	725
75	125	50	90	80	135	155	245	165	450	250	350	270	425	355	575
160	240	120	160	140	225	210	315	185	340	340	420	370	450	415	565
150	255	140	195	240	345	385	600	300	490	385	560	425	740	560	990
125	180	90	125	145	205	210	355	190	290	325	500	250	500	450	610
120	190	65	80	85	135	200	340	260	380	300	410	325	430	385	625
105	150	85	110	95	135	165	225	245	360	220	310	225	320	300	460
105	150	95	125	120	180	180	245	240	465	220	265	220	285	255	450



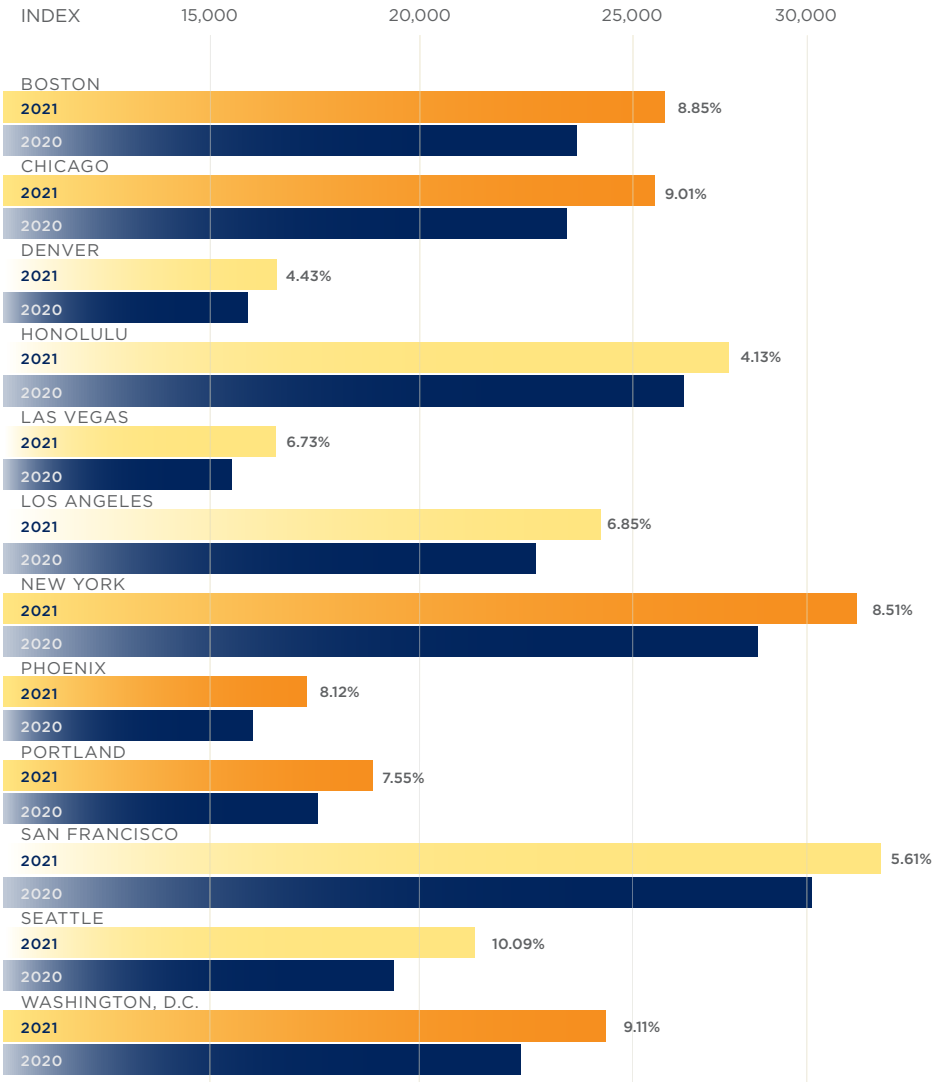
UNITED STATES

COMPARATIVE COST INDEX



City	October 2020	January 2021	April 2021	July 2021	October 2021	Annual % Change
Boston	23,773	23,974	24,711	25,207	25,877	8.85%
Chicago	23,518	23,745	24,854	25,064	25,636	9.01%
Denver	15,864	15,914	16,150	16,349	16,567	4.43%
Honolulu	26,325	26,647	26,891	27,158	27,413	4.13%
Las Vegas	15,480	15,623	16,077	16,302	16,522	6.73%
Los Angeles	22,781	22,928	23,567	24,006	24,341	6.85%
New York	28,112	28,542	29,507	29,930	30,504	8.51%
Phoenix	15,979	16,133	16,824	17,068	17,276	8.12%
Portland	17,539	17,658	18,348	18,616	18,864	7.55%
San Francisco	29,423	29,611	30,246	30,467	31,073	5.61%
Seattle	19,367	19,452	19,804	20,305	21,320	10.09%
Washington, DC	22,418	23,040	23,841	24,369	24,460	9.11%

Comparative Cost Map and Bar Graph Indicate percentage change between October 2020 to October 2021.



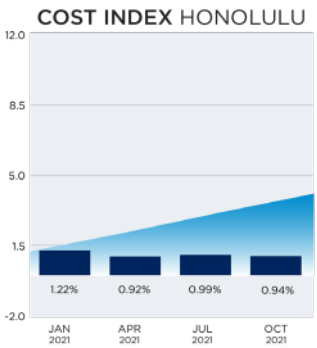
Each quarter we look at the comparative cost of construction in 12 US cities, indexing them to show how costs are changing in each city in particular, and against the costs in the other 11 locations. You will be able to find this information in the graph titled Comparative Cost Index (above) and in the Cost and Change Summary (right).

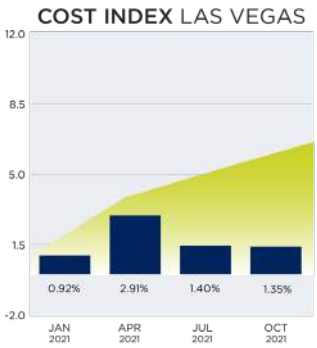
Our Comparative Cost Index tracks the 'true' bid cost of construction, which includes, in addition to costs of labor and materials, general contractor and sub-contractor overhead costs and fees (profit). The index also includes applicable sales/use taxes that 'standard' construction contracts attract. In a 'boom,' construction costs typically increase more rapidly than the net cost of labor and materials. This happens as the overhead levels and profit margins are increased in response to the increasing demand. Similarly, in a 'bust', construction cost increases are dampened (or may even be reversed) due to reductions in overheads and profit margins.

UNITED STATES

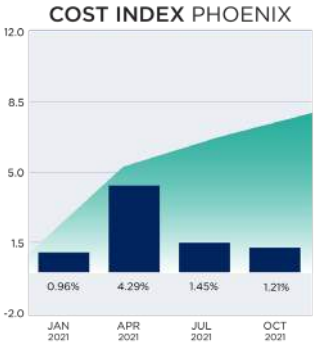
The following escalation charts track changes in the cost of construction each quarter in many of the cities where RLB offices are located. Each chart illustrates the percentage change per period and the cumulative percentage change throughout the charted timeline.

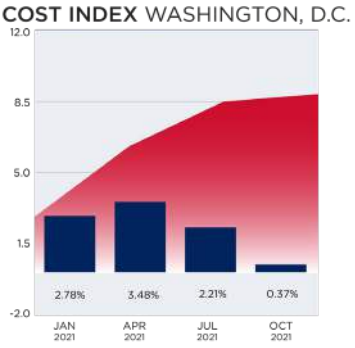
Percentage change per quarter Cumulative percentage change for the period shown





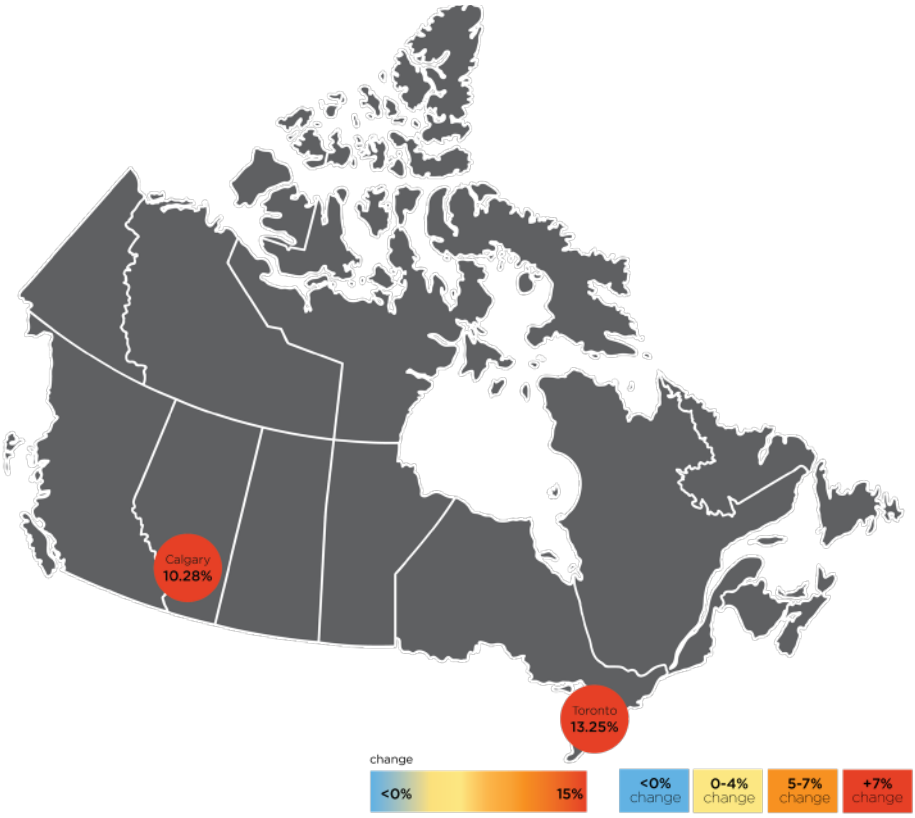
Our research suggests that between July 1, 2021 and October 1, 2021 the national average increase in construction costs was approximately 1.82% (compared to 0.25% this time last year). Boston, Chicago, New York, San Francisco, and Seattle all experienced increases greater than 1.82% in the quarter. Denver, Honolulu, Las Vegas, Los Angeles, Phoenix, Portland, and Washington, D.C. experienced increases less than the national average.





CANADA

COMPARATIVE COST INDEX

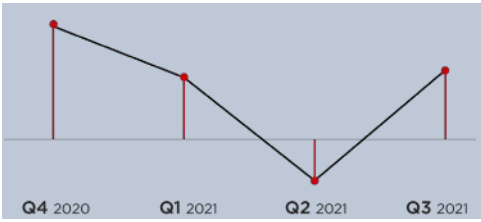


City	October 2020	January 2021	April 2021	July 2021	October 2021	Annual % Change
• Calgary	19,985	20,483	21,160	21,617	22,039	10.28%
• Toronto	24,409	25,069	26,050	26,983	27,642	13.25%

Construction has started on the $5.5B Scarborough Subway Extension and this project is expected to create 3,000 jobs per year during its eight-year construction. The provincial government announced an investment about $2.6B for 2021–22 to support of the Ontario Highways Program, which features more than 580 construction, expansion, and rehabilitation projects including committed funding to build and advance the Bradford Bypass and Highway 413.

The government of Alberta has announced the plan to build a $2.5B carbon-neutral ammonia and methanol production facility in the province. This investment is part of the $20.3B Alberta's Recovery Plan, designed to create jobs and diversify the province's economy. In Calgary, the $500M BMO Centre expansion construction is underway. It will be the largest facility in western Canada, giving Calgary top-tier destination status in the competitive international meetings and conventions market.

KEY CANADIAN STATISTICS



Gross Domestic Product (GDP)

Canada's GDP continues to fluctuate, due to an ongoing turbulent business cycle.

Consumer Price Index (CPI)

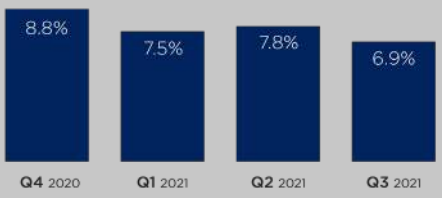
CPI continues its upward trend, reporting an inflation rate of 1.34% during Q3.

Housing Starts

Housing starts are down 7.39% from the last quarter, and up 9.79% from this time last year.

Unemployment

Canada unemployment experiences nominal change, reporting 6.9% during Q3 2021.



GDP represented in percent change from the preceding quarter, seasonally adjusted at annual rates. CPI quarterly figures represent the monthly value at the end of the quarter. Inflation rates represent the total price of inflation from the previous quarter, based on the change in the Consumer Price Index. General Unemployment rates are based on the total population 16 years and older. Construction Unemployment rates represent only the percent of experienced private wage and salary workers in the construction industry 15 years and older. Unemployment rates are seasonally adjusted, reported at the end of the period.

Sources: Statistics Canada

ABOUT RIDER LEVETT BUCKNALL

Rider Levett Bucknall is an award-winning international firm known for providing project management, construction cost consulting, and related property and construction advisory services – at all stages of the design and construction process.

This issue was compiled by Taryn Harbert with contributions from Aled Jenkins, Antonio Gonzales, Cassie Idehara, Chris Harris, Daniel Junge, Evans Pomegas, James Casey, Julia Flores, Kirk Miller, Lucy Liu, Maelyn Uyehara, Paul Brussow, Paraic Morrissey, Peter Knowles, Robin Kankerwal, Ryan Bosworth, and Scott Macpherson.

If you have questions or for more information, please contact us.

BOSTON
Phone: +1 617 737 9339
E-mail: BOS@us.rlb.com
Contact: Michael O'Reilly

CALGARY
Phone: +1 403 571 0505
E-mail: YYC@ca.rlb.com
Contact: Mel Yungblut

CHICAGO
Phone: +1 312 819 4250
E-mail: ORD@us.rlb.com
Contact: Chris Harris

DENVER
Phone: +1 720 904 1480
E-mail: DEN@us.rlb.com
Contact: Peter Knowles

HILO
Phone: +1 808 934 7953
E-mail: ITO@us.rlb.com
Contact: Guia Lasquete

HONOLULU
Phone: +1 808 521 2641
E-mail: HNL@us.rlb.com
Contact: Erin Kirihara
Cassie Idehara

KANSAS
Phone: +1 816 977 2740
E-mail: MCI@us.rlb.com
Contact: Julian Anderson

LAS VEGAS
Phone: +1 702 227 8818
E-mail: LAS@us.rlb.com
Contact: Paul Brussow

LOS ANGELES
Phone: +1 213 689 1103
E-mail: LAX@us.rlb.com
Contact: Aled Jenkins

MAUI
Phone: +1 808 875 1945
E-mail: OGG@us.rlb.com
Contact: Paul Belshoff

NEW YORK
Phone: +1 646 821 4788
E-mail: NYC@us.rlb.com
Contact: Paraic Morrissey

PHOENIX
Phone: +1 602 443 4848
E-mail: PHX@us.rlb.com
Contact: Julian Anderson
Scott Macpherson
John Jozwick
Scott Sumners

PORTLAND
Phone: +1 503 226 2730
E-mail: PDX@us.rlb.com
Contact: Daniel Junge

SAN FRANCISCO
Phone: +1 415 362 2613
E-mail: SFO@us.rlb.com
Contact: Ryan Bosworth

SAN JOSE
Phone: +1 650 943 2317
E-mail: SJC@us.rlb.com
Contact: Joel Brown

SEATTLE
Phone: +1 206 441 8872
E-mail: SEA@us.rlb.com
Contact: Craig Colligan

ST. LUCIA
Phone: +1 758 452 2125
E-mail: UVF@us.rlb.com
Contact: David Piper

TORONTO
Phone: +1 905 827 8218
E-mail: YYZ@us.rlb.com
Contact: Mel Yungblut

TUCSON
Phone: +1 520 777 7581
E-mail: TUS@us.rlb.com
Contact: Josh Marks

WAIKOLOA
Phone: +1 808 883 3379
E-mail: KOA@us.rlb.com
Contact: Guia Lasquete

WASHINGTON, DC
Phone: +1 410 740 1671
E-mail: DCA@us.rlb.com
Contact: Kirk Miller

RLB.com